

CLAIMS

What is claimed is:

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1. A method comprising:
 - 2 transmitting data on a first virtual circuit in a network;
 - 3 receiving a message on a second virtual circuit in said network, said
 - 4 message signaling a failure detected in said network; and
 - 5 switching said data transmitted on said first virtual circuit to said second
 - 6 virtual circuit within a predetermined period of time.
 2. The method according to claim 1, wherein said network is an Internet Protocol (IP) network.
 3. The method according to claim 1, wherein said network is an Asynchronous Transfer Mode (ATM) network.
 4. The method according to claim 1, wherein receiving said message further comprises monitoring said first virtual circuit and said second virtual circuit.

1 5. The method according to claim 1, wherein said data is transmitted along
2 one connection of a plurality of connections established in said first virtual
3 circuit.

1 6. The method according to claim 5, wherein a predetermined bandwidth
2 to support said plurality of connections is assigned to said first virtual circuit
3 and said second virtual circuit.

1 7. The method according to claim 1, wherein said predetermined period of
2 time is 500 milliseconds.

1 8. The method according to claim 5, wherein switching said data further
2 comprises transmitting said data related to said one connection on said second
3 virtual circuit.

1 9. The method according to claim 5, wherein switching said data is
2 performed for said one connection of said plurality of connections in said first
3 virtual circuit.

1 10. The method according to claim 5, wherein receiving said message
2 further comprises:

3 detecting a predetermined gap in transmission of said data along said
4 one connection; and
5 discarding said message without switching said data.

1 11. The method according to claim 5, wherein receiving said message
2 further comprises:

3 detecting a predetermined gap in transmission of said data along said
4 one connection;
5 transmitting a data packet signaling said predetermined gap; and
6 discarding said message without switching said data.

1 12. The method according to claim 5, wherein switching said data further
2 comprises:

3 canceling transmission of said data along said one connection in said first
4 virtual circuit;
5 establishing a second connection in said second virtual circuit; and
6 transmitting said data along said second connection in said second
7 virtual circuit.

1 13. The method according to claim 5, wherein receiving said message
2 further comprises:

3 completing transmission of said data along said one connection; and
4 discarding said message without switching said data.

1 14. The method according to claim 5, wherein said one connection is a Voice
2 over Internet Protocol (VoIP) connection.

1 15. The method according to claim 5, wherein said one connection is a Voice
2 over Asynchronous Transfer Mode (VoATM) connection.

1 16. A method comprising:
2 receiving data on a first virtual circuit in a network;
3 transmitting a message on a second virtual circuit and said first virtual
4 circuit in said network, if said data is not received for a predetermined period
5 of time; and
6 receiving said data on said second virtual circuit in said network.

1 17. The method according to claim 16, wherein said network is an Internet
2 Protocol (IP) network.

1 18. The method according to claim 16, wherein said network is an
2 Asynchronous Transfer Mode (ATM) network.

1 19. The method according to claim 16, further comprising:
2 monitoring said first virtual circuit and said second virtual circuit for a
3 second predetermined period of time; and
4 transmitting said message if said data is not received during said second
5 predetermined period of time.

1 20. The method according to claim 16, wherein said predetermined period of
2 time is 50 milliseconds.

1 21. The method according to claim 19, wherein said second predetermined
2 period of time is 500 milliseconds.

1 22. The method according to claim 16, further comprising monitoring said
2 first virtual circuit and said second virtual circuit for said predetermined period
3 of time.

1 23. The method according to claim 16, wherein a plurality of connections is
2 established on said first virtual circuit.

1 24. The method according to claim 16, wherein said data is received along
2 one connection of a plurality of connections established in said first virtual
3 circuit.

1 25. The method according to claim 24, wherein transmitting said message
2 further comprises monitoring said connection for said predetermined period of
3 time.

1 26. The method according to claim 24, wherein transmitting said message
2 further comprises detecting a failure on said one connection in said first virtual
3 circuit.

1 27. The method according to claim 26, wherein said detecting is performed
2 subsequent to receiving a first data packet of said data along said one
3 connection.

1 28. The method according to claim 22, wherein said monitoring is
2 performed subsequent to receiving a first data packet of said data on said first
3 virtual circuit.

1 29. The method according to claim 23, wherein a predetermined bandwidth
2 to support said plurality of connections is assigned to said first virtual circuit
3 and said second virtual circuit.

1 30. The method according to claim 24, wherein said one connection is a
2 Voice over Internet Protocol (VoIP) connection.

1 31. The method according to claim 24, wherein said one connection is a
2 Voice over Asynchronous Transfer Mode (VoATM) connection.

1 32. An apparatus comprising:
2 means for transmitting data on a first virtual circuit in a network;
3 means for receiving a message on a second virtual circuit in said
4 network, said message signaling a failure detected in said network; and
5 means for switching said data transmitted on said first virtual circuit to
6 said second virtual circuit within a predetermined period of time.

1 33. The apparatus according to claim 32, wherein said means for receiving
2 further comprises means for monitoring said first virtual circuit and said
3 second virtual circuit.

1 34. An apparatus comprising:
2 means for receiving data on a first virtual circuit in a network;
3 means for transmitting a message on a second virtual circuit and said
4 first virtual circuit in said network, if said data is not received for a
5 predetermined period of time; and
6 means for receiving said data on said second virtual circuit in said
7 network.

1 35. The apparatus according to claim 34, further comprising:
2 means for monitoring said first virtual circuit and said second virtual
3 circuit for a second predetermined period of time; and
4 means for transmitting said message if said data is not received during
5 said second predetermined period of time.

1 36. A computer readable medium having instructions which, when executed
2 by a processing system, cause the system to:
3 transmit data on a first virtual circuit in a network;
4 receive a message on a second virtual circuit in said network, said
5 message signaling a failure detected in said network; and
6 switch said data transmitted on said first virtual circuit to said second
7 virtual circuit within a predetermined period of time.

1 37. The medium of claim 36, wherein the executed instructions further cause
2 the system to:
3 receive said message by monitoring said first virtual circuit and said
4 second virtual circuit.

1 38. A computer readable medium having instructions which, when executed
2 by a processing system, cause the system to:
3 receive data on a first virtual circuit in a network;
4 transmit a message on a second virtual circuit and said first virtual
5 circuit in said network, if said data is not received for a predetermined period
6 of time; and
7 receive said data on said second virtual circuit in said network.

1 39. The medium of claim 38, wherein the executed instructions further cause
2 the system to:
3 monitor said first virtual circuit and said second virtual circuit for a
4 second predetermined period of time; and
5 transmit said message if said data is not received during said second
6 predetermined period of time.